

Purpose: To generally characterize Massachusetts coastal waters within the Ocean Planning Area prior to the Ocean Plan being implemented (2008).

Goal: One paragraph to one page written on each subtopic below by 21 November 2008.

1. Introduction
 - 1.1. Oceans Act of 2008
 - 1.2. Definition of Ocean Planning Area
 - 1.2.1. List of Communities in Planning Area
 - 1.2.2. Population (important?)
 - 1.2.3. Coastline length (4,537 km—includes inlets)
 - 1.2.4. Watersheet area (5,554.29 km²)
2. Water Column Features
 - 2.1. Tidal Range
 - 2.2. Water depth
 - 2.3. Currents/circulation (driven in part by seasonal wind patterns)
 - 2.4. Surface Temperature
 - 2.5. Seasonal changes (stratification, temp, salinity, etc).
 - 2.6. Upwelling areas
 - 2.7. Water Quality (light penetration, salinity, temperature, pH, bacteria, petroleum products, dissolved metals, DO, Chl a, nutrients)
3. Seabed Features
 - 3.1. Geologic composition
 - 3.2. Sediment transport
 - 3.3. Place holder for habitat characterization (e.g., how geology drives biology)
 - 3.4. Sediment Quality (penetration, petroleum products, metals)
4. Habitat characterization
 - 4.1. Primary and Secondary Productivity (phytoplankton and zooplankton)
 - 4.2. Fishery Resources and Habitat
 - 4.3. Benthic Species (include needed time for recovery from disturbance)
 - 4.4. Avifauna
 - 4.5. Marine mammals and reptiles
 - 4.6. Critical Habitat (this may overlap w/ protected areas (1.6.7) to some degree)
5. Archeological and Cultural Sites
 - 5.1. Shipwrecks
 - 5.2. Native American sites
6. Human Uses
 - 6.1. Fishing
 - 6.1.1. Commercial (mobile, fixed)
 - 6.1.2. Recreational
 - 6.1.3. Aquaculture

- 6.2. Recreation other than fishing
 - 6.2.1. Boating (regattas, day sailing)
 - 6.2.2. Marine Mammal & Bird Viewing
 - 6.2.3. Diving
- 6.3. Transportation
 - 6.3.1. Shipping
 - 6.3.2. Cruise Ships
 - 6.3.3. Ferries/Commuter Boats
 - 6.3.4. Navigational Aids and Lanes
- 6.4. Industry (LNG, power plants, others) & Wastewater Discharges (Gloucester, Manchester, SESD, Lynn, MWRA)
- 6.5. Military Exercises
- 6.6. Ocean Disposal (dredged materials, hazardous waste)
- 6.7. Protected Areas, Man-made Habitat (artificial reefs, eelgrass beds), Research
- 6.8. Mining
- 6.9. Telecommunication and energy cables (e.g., Hibernia, to/from Islands)
- 6.10 Renewable Energy
- 7. Economic Value
 - 7.1. Direct Use Value
 - 7.2. Indirect Use Value
 - 7.3. Nonuse Value (e.g., aesthetic value; how much would one pay for a clean ocean?)

Questions for SAC:

- 1. Does this outline capture all characteristics and uses of the planning area?**
- 2. What should the order be for Human Uses?**
- 3. Should the units of measure be metric or English? Audience is managers and state agencies. (If metric, place conversions in parentheses).**